What is Claimed is

Sub A2

1. A method for producing electrical cables coated with cross-linked polyethylene, in which a polyethylene granulate is mixed with a liquid silane-containing cross-linking agent, the granulate mixture thus prepared is melted in an extruder and extruded onto the electrical cable, and the extruded coating is cross-linked in the presence of water or steam,, wherein said polyethylene granulate comprises a polyethylene homopolymer and a polyethylene copolymer, and wherein the copolymer content in the coating on the cable is between 1 and 8% by weight.

2. A method as claimed in Claim 1, wherein the granulate mixture is coated with a liquid mixture of silane, peroxide and possibly a stabilizer prior to a compounding process.

3. A method as claimed in Claim 1, wherein the granulate mixture is coated with a liquid mixture of silane, peroxide and possibly a stabilizer during the compounding process.

4. A method as claimed in claim 1, wherein the granulate material coated with the cross-linking agent is grafted, homogenized and subsequently regranulated.

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5. A method as claimed in claim 4, wherein the regranulate provided with a catalyst or a catalyst batch, is introduced into an insulation extruder, extruded onto the

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electrical cable, and the coating extruded onto the electrical cable is cross-linked in the presence of water or steam.

6. A method as claimed in claim 4, wherein the granular polyethylene homopolymer material alone is coated with the liquid cross-linking agent in a compounding system, melted, grafted, homogenized and subsequently regranulated, and the regranulated and a granular polyethylene copolymer material with a copolymer content of more than 30%, which is cross-linked with a catalyst, are placed into an insulation extruder, where the mixture is melted, homogenized and extruded onto the electrical cable.

7. A method as claimed in claim 1, wherein the polyethylene copolymer used is an ethylene butyl acrylate (EBA), an ethylene ethyl acrylate (EEA) or an ethylene methyl acrylate (EMA), each with a copolymer content of 10% – 35%.

8. A method as claimed in claim 1, wherein a granular material of polyethylene homopolymer and polyethylene copolymer is placed into an insulation extruder, a liquid mixture of silane, peroxide and possibly a stabilizer as well as a catalyst or a highly concentrated catalyst batch is likewise placed into the insulation extruder, and the mixture is melted, grafted and homogenized in the insulation extruder, and the grafted, homogenized material is extruded onto the electrical cable and cross-linked in the presence of water or steam.

9. A method as claimed in claim 6, wherein said compounding system comprises an extruder.